IN THE CLAIMS:

Please amend Claims 1, 3, 8-10, 13, and 16-19 as follows.

1. (Currently Amended) An image processing apparatus comprising:

input means for inputting original image data showing an original image, wherein the original image data is constructed by a plurality of bit planes;

compressing means for lossless-compressing data of at least a first predetermined bit plane of the original image data to form compression data; and

first embedding means for embedding the compression data obtained by said compressing means into the first predetermined bit plane of the original image data.

2. (Previously Presented) An apparatus according to claim 1, wherein the first predetermined bit plane is a lower bit plane.

3. (Currently Amended) An apparatus according to claim 1, wherein said compressing means ~~comprises second embedding means for embedding~~ compresses the data of the first predetermined bit plane and data of a second predetermined bit plane of the original image data, and ~~further~~ said apparatus further comprises second embedding means for embedding additional information into the second predetermined bit plane.

4. (Previously Presented) An apparatus according to claim 3, wherein the second predetermined bit plane is an upper bit plane.

5. (Cancelled)

6. (Cancelled)

7. (Previously Presented) An apparatus according to claim 1, wherein said original image data comprises color components of RGB.

8. (Currently Amended) An image processing method comprising:

an input step of inputting original image data representing an original image, wherein the original image data is constructed by a plurality of bit planes;

a compressing step of lossless-compressing data of at least a first predetermined bit plane of the original image data to form compression data; and

a first embedding step of embedding the compression data obtained in the compressing step into the first predetermined bit plane of the original image data.

9. (Currently Amended) A storage medium which stores an image processing program so that it can be read out by a computer, wherein said program comprises:

an input step of inputting original image data showing an original image, wherein the original image data is constructed by a plurality of it planes;

a compressing step of lossless-compressing data of at least a first predetermined bit plane of the original image data to form compression data; and

a first embedding step of embedding the compression data obtained in the compressing step into the first predetermined bit plane of the original image data.

10. (Currently Amended) An image processing apparatus comprising:

input means for inputting original image data showing an original image, wherein the original image data is constructed by a plurality of bit planes;

compression means for lossless-compressing data of a first predetermined bit plane and data of a second predetermined bit plane of the original image data to form compression data;

first embedding means for embedding the data compressed by the compressing means into the first predetermined bit plane of the original data; and

second embedding means for embedding additional information into the second predetermined bit plane of the original image data.

11. (Previously Presented) An apparatus according to claim 10, further comprising holding means for holding information representing the first predetermined bit plane, as key information.

12. (Original) An apparatus according to claim 10, wherein the compression by said compressing means is a reversible compression.

13. (Currently Amended) An image processing apparatus comprising:

input means for inputting original image data showing an original image, wherein the original image data is constructed by a plurality of bit planes;

compressing means for lossless-compressing data of a first predetermined bit plane and data of a second predetermined bit plane of the original image data to form compression data;

encrypting means for encrypting data showing a result of the compression in said compressing means;

first embedding means for embedding the data encrypted by the encrypting means into the first predetermined bit plane of the original image data; and

second embedding means for embedding additional information into the second predetermined bit plane of the original image data.

14. (Previously Presented) An apparatus according to claim 13, further comprising holding means for holding information representing the first predetermined bit plane, as key information.

15. (Original) An apparatus according to claim 13, wherein the compression by said compressing means is a reversible compression.

16. (Currently Amended) An image processing method comprising:

input means for inputting original image data showing an original image, wherein the original image data is constructed by a plurality of bit planes;

a compressing step of lossless-compressing data of a first predetermined bit plane and data of a second predetermined bit plane of the original image data to form compression data;

a first embedding step of embedding the data compressed by the compressing step into the first predetermined bit plane of the original image data; and

a second embedding step of embedding additional information into the second predetermined bit plane of the original image data.

17. (Currently Amended) An image processing method comprising:

input means for inputting original image data showing an original image, wherein the original image data is constructed by a plurality of bit planes;

a compressing step of lossless-compressing data of a first predetermined bit plane and data of a second predetermined bit plane of the original image data to form compression data;;

an encrypting step of encrypting data showing a result of the compression in said compressing step;

a first embedding step of embedding the data encrypted by the encrypting step into the first predetermined bit plane of the original image data; and

a second embedding step of embedding additional information into the second predetermined bit plane of the original image data.

18. (Currently Amended) A computer-readable storage medium which stores a program for executing an image processing method, wherein said method comprises:

input means for inputting original image data showing an original image, wherein the original image data is constructed by a plurality of bit planes;

a compressing step of lossless-compressing data of a first predetermined bit plane and data of a second predetermined bit plane of the original image data to form compression data;

a first embedding step of embedding the data compressed by the compressing step into the first predetermined bit plane of the original image data; and

a second embedding step of embedding additional information into the second predetermined bit plane of the original image data.

19. (Currently Amended) A computer-readable storage medium which stores a program for executing an image processing method, wherein said method comprises:

input means for inputting original image data showing an original image, wherein the original image data is constructed by a plurality of bit planes;

a compressing step of lossless-compressing data of a first predetermined bit plane and data of a second predetermined bit plane of the original image data to form compression data;

an encrypting step of encrypting data showing a result of the compression in said compressing step;

a first embedding step of embedding the data encrypted by the encrypting step into the first predetermined bit plane of the original image data; and

a second embedding step of embedding additional information into the second predetermined bit plane of the original image data.

20. (Previously Presented) An apparatus according to claim 1, wherein the compression by the compressing means is reversible compression.

21. (Previously Presented) An apparatus according to claim 1, wherein the first embedding means embeds the data as an invisible watermark.

22. (Previously Presented) An apparatus according to claim 11, wherein the first embedding means embeds the data as an invisible watermark, and the second embedding means embeds the additional information as a visible watermark.